

REMARKS

Claims 1 to 20 are currently pending in the present application. Claims 1-2, 4-7 and 10 are amended herein. No new matter is added by the amendments.

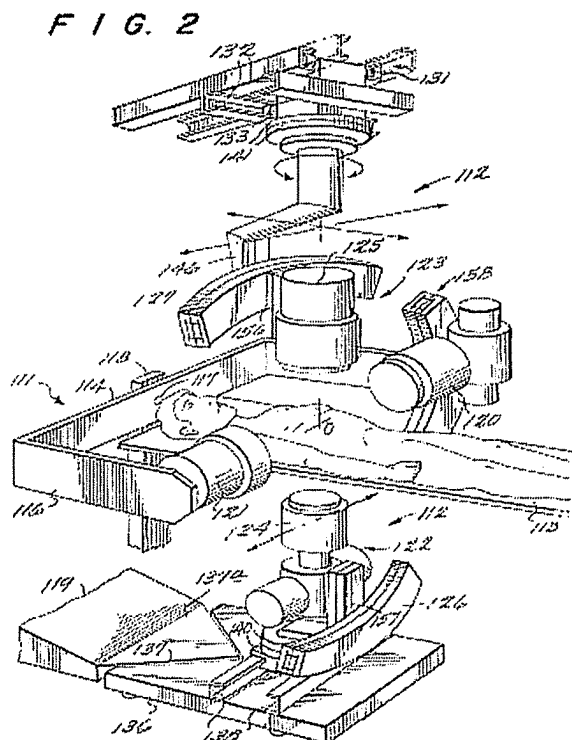
The Office Action objects to the drawings asserting that the feature of the cone beam wide enough to completely irradiate the x-ray detector in all possible orientations and positions must be shown. The claims 1, 4, 5, and 10 have been amended to clarify the feature of the position and orientation of the X-ray detector relative to the X-ray source being over a range, and the conical X-ray beam being wide enough to completely irradiate the X-ray detector over the entire range. Figure 7 has been corrected to show this feature. Support for the claim amendments and the drawing correction is provided at least at paragraph [0042] of the specification.

Claims 1 to 20 stand rejected under 35 U.S.C. 112, first paragraph. The claims 1, 4, 5, and 10 have been amended to clarify the feature of the position and orientation of the X-ray detector relative to the X-ray source being over a range, and the conical X-ray beam being wide enough to completely irradiate the X-ray detector over the entire range. Applicants respectfully assert that the amendments to the claims obviate this rejection.

Claims 1 to 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,541,293 to Caugant et al. (hereinafter "Caugant") in view of U.S. Patent No. 6,075,837 to Roos et al. (hereinafter "Roos").

Claims 1, 5 and 10 each include the features of the position and orientation of the X-ray detector relative to the X-ray source being over a range, and the conical X-ray beam being wide enough to completely irradiate the X-ray detector over the entire range.

As conceded by the Office Action, Caugant does not disclose the use of a conical beam but rather a linear beam between the x-ray source 124 and the x-ray receiver 125, which are shown in FIG. 2:



The Office Action asserts that it would have been obvious to utilize a conical beam based on the disclosure of Roos and motivated by providing high quality images. However, the use of conical beams and in particular, a conical beam that is wide enough to completely irradiate the X-ray detector over the entire range of position and orientation of the X-ray detector relative to the X-ray source, would render the Caugant device unfit for its intended purpose of providing primary and supplementary x-ray systems that are usable together for "simultaneous vision of a given area." (Caugant col. 2, lines 63). It is clear from Figure 2 that a conical beam having the width of claims 1, 5 and 10 and being emitted by X-ray source 124 of supplementary system 112 would interfere with the detection by the x-ray receiver 121 and the emitting by x-ray source 120 of primary

system 111 for most of the possible positions and orientation of the X-ray receiver 125 relative to the X-ray source 124.

As such, there is no motivation to modify the Cagant system as suggested by the Office Action and claims 1, 5 and 10 are patentable over this combination of art. Claims 6-9 and 11-20 depend from claims 5 and 10 and thus are also not obvious over Cagant in view of Roos for at least this reason.

Claim 2 includes the feature of the X-ray detector and the X-ray source being movably connected to each other by an arm. The sub-assembly 122 that has the x-ray source 124 and the sub-assembly 123 that has the x-ray receiver 125 are independent sub-assemblies as shown above in Figure 2 and described in Cagant:

The X-ray installation shown in FIG. 2 represents an advantageous application of the invention, which clearly illustrates the outstanding properties of the above-described slide assembly. This installation substantially comprises two source-plus-receiver units or systems 111 and 112 which are disposed about an analysing center 0 defined at a distance of several centimetres above a table 113 on which a patient is adapted to be placed. System 111, or "main system", comprises a support 114 having two parallel arms 115, 116 rotatable about an horizontal axis 117 of a fixed support 118 reposing on the floor through the intermediary of a base 119. Arm 115 supports at its end a X-ray source 120 and arm 116 supports at its end a receiver 121 associated to a luminance amplifier. Source 120 and receiver 121 associated to the luminance amplifier are located opposite to each other on either side of analyzing center 0. System 112, or "supplementary system", is mainly provided for utilisation during examinations where it is required to obtain simultaneous vision of one given region or area under two different selected incidence angles, e.g. especially during cardiovascular examinations. **This system mainly comprises two movable, independent sub-assemblies 122, 123. Lower sub-assembly 122 supports an X-ray source 124 similar to source 120 while upper sub-assembly 123 supports a receiver 125 similar to receiver 121.** (Cagant col. 4, line 50 through col. 5, line 8)(emphasis added).

Moreover, Cagant teaches against the X-ray receiver 125 and the X-ray source 124 being movably connected to each other by an arm. As described and shown above, Cagant has two separate imaging systems 111 and 112. Both of these systems are rotatable. To allow for the intended rotation of both systems, Cagant utilizes separate subsystems 122 and 123 in the supplementary system 112, where the lower subsystem 122 can be rolled into position (see rollers shown above in Figure 2). Additionally, the system is designed to be "compact." (Cagant col. 1, line 35). Any attempt to connect the X-ray receiver 125 and the X-ray source 124, besides reducing the range of movement of the systems, would also require a complicated structure that would not be compact.

Claims 3 and 4 depend from claim 2 and thus are also not obvious. Additionally, claim 4 includes the feature of the position and orientation of the X-ray detector relative to the X-ray source being over a range, and the conical X-ray beam being wide enough to completely irradiate the X-ray detector over the entire range. As described above, Cagant teaches against the use of this feature of claim 4.

Conclusion

In view of the foregoing, Applicants respectfully submit that the specification, the drawings and all claims presented in this application are currently in condition for allowance. Accordingly, Applicants respectfully request favorable consideration and that this application be passed to allowance.

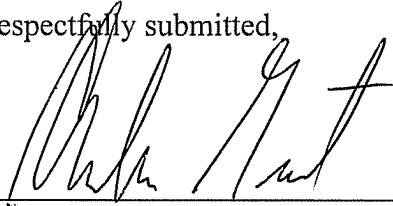
Should any changes to the claims and/or specification be deemed necessary to place the application in condition for allowance, the Examiner is respectfully requested to contact the undersigned to discuss the same.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call David Barnes, Esq., Philips North America Corporation at the number below.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Andrew C. Gust", written over a horizontal line.

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